Exhibit EE

AP70 MK2
Operator Manual

SIMRAD

ENGLISH

Preface

Disclaimer

As Navico is continuously improving this product, we retain the right to make changes to the product at any time which may not be reflected in this version of the manual. Please contact your nearest distributor if you require any further assistance.

It is the owner's sole responsibility to install and use the equipment in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing maritime safety practices.

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Governing language

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Warranty

The warranty card is supplied as a separate document. In case of any queries, refer to the brand website of your unit or system:

www.navico-commercial.com

Compliance statements

Navico declare under our sole responsibility that the product conforms with the requirements of:

- C-tick
- CE under EMC Directive 2014/30/EU
- European Council Directive 2014/90/EU on Marine Equipment modified by Commission Implementing Regulation (EU) 2018/773 (MED) - Wheelmark

→ **Note:** The AP70 MK2 system is Wheelmark approved only when installed according to the relevant AP70 MK2 MED-B certificate.

The relevant declaration of conformity and certificates are available in the product's section at the following website:

www.navico-commercial.com

About this manual

This manual is a reference guide for operating the unit. It assumes that all equipment is installed and configured, and that the system is ready to use.

Images used in this manual might not exactly match the screen on your unit.

Intended audience

This manual is written for system operators.

The manual assumes that the reader has basic knowledge about this type of equipment in regards to:

- operation
- nautical terminology and practices

Important text conventions

Important text that requires special attention from the reader is emphasized as follows:

➜ **Note:** Used to draw the reader's attention to a comment or some important information.

> ⚠ **Warning:** Used when it is necessary to warn personnel that they should proceed carefully to prevent risk of injury and/or damage to equipment/personnel.

Manual version

This manual is written for software version 1.0. The manual is continually updated to match new software releases. The latest available manual version can be downloaded from the following website:

- www.navico-commercial.com

Change log

Part no	Date and description
988-12375-001	2019-Jan-11
	First version.

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Introduction

Front panel keys
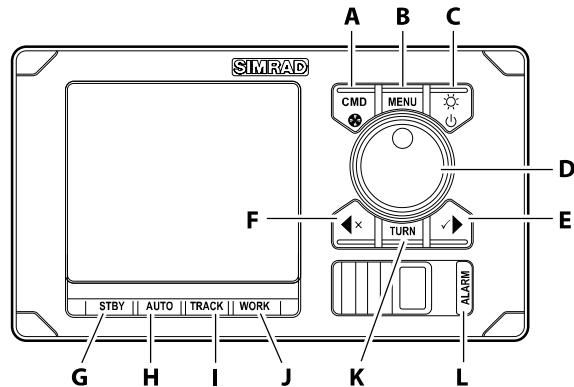
A   **Command/Thruster key**
- Press to take/request command
- Press and hold to activate/deactivate available thrusters

B   **Menu key**
- Press once to display the Quick menu
- Press twice to show the Settings menu

C   **Power/Brilliance key**
- Press to display the Display setup dialog
- Press and hold to turn the unit to sleep mode

D   **Rotary knob**
Menu and dialog operation:
- Turn to move up and down in menus and dialogs
- Turn to adjust a value
- Press to select a menu option and to enter the next menu level

In Standby and NFU mode:
- Press and hold to activate Follow up (FU) mode

In FU mode:
- Turn to set the rudder angle

In automatic modes:
- Turn to change the set heading/set course, press to re-activate automatic mode with current heading/course as reference

E   **Starboard (confirm) key**
Menu and dialog operation
- press to confirm/enter next menu level

In Standby mode:
- press to activate NFU mode

In automatic modes:
- press to change set heading/set course to starboard

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F   Port (cancel) key

Menu and dialog operation:
- press to cancel and to return previous menu level
- press and hold to close the menu

In Standby mode:
- Press to activate NFU mode

In automatic modes:
- press to change set heading/set course to port

G   Standby key
- Press to turn the autopilot to Standby mode

H   Auto key
- Press once to activate Auto or NoDrift mode
- Re-press to toggle between the Auto and NoDrift mode options

I   Track key
- Press to activate Nav mode

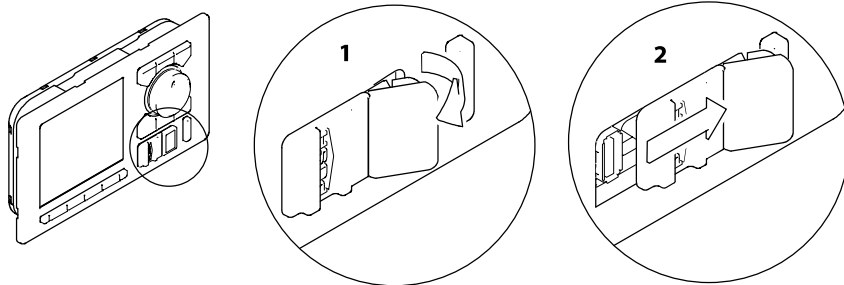**J   Work key**
- Press to display the Work quick menu

K   Turn key
- Press to display the Turn quick menu

L   Alarm key
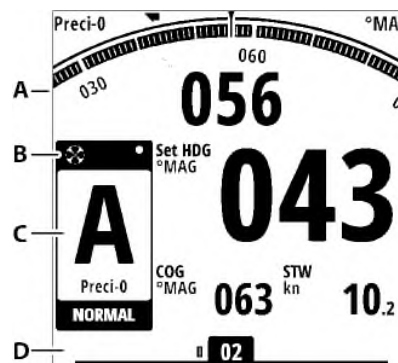- Press to display the list of active alerts

USB port

The USB port can be used to:
- connect a storage device

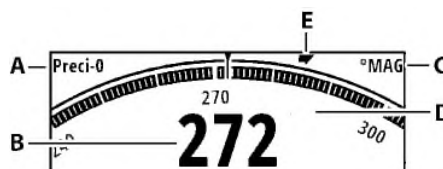The USB devices should be standard PC compatible hardware.

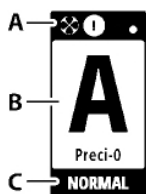When not in use, the protective door should always be securely shut to prevent possible water ingress.

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The autopilot page

A   Heading repeater

B   Status panel

C   Mode info panel

D   Rudder bar

Heading repeater

A   Heading source

B   Current heading

C   Heading unit (True or Magnetic)

D   Set heading

E   Rate of Turn (ROT) indicator

Status panel

The panel includes status icons (**A**), active mode with steering reference (**B**), and active profile (**C**).

The following mode abbreviations are used:

- **S**: Standby
- **A**: AUTO
- **FU**: Follow-up
- **ND**: No Drift
- **NFU**: Non-Follow Up
- **N**: NAV
- S-turn icon

If the autopilot is operated from another control unit, the passive icon is shown in the mode indication field.

If the autopilot is controlled by an external system selector, the mode indication will be replaced as below.

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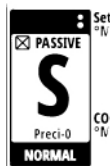
Passive control unit
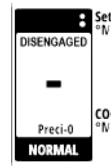
Autopilot disengaged by external system selector

Available status icons are shown below. Only active icons are visible.

Icon available if a thruster is installed. The icon will be shaded when the truster is deactivated for steering

Active alert. Red icon for alarms, yellow for warning. See more details in *"The alert system"* on page 36.

Locked control unit

Picture freeze indicator. Two dots alternate slowly to show that the screen is alive and that information from sensors is updated

Mode info panel

The panel contains mode specific content and varies with the operational mode. See *"Autopilot modes"* on page 20 onwards for more details.

If a thruster is available and active, the mode info panel will be split to show thruster information.

No thruster available

Thruster in use

➔ **Note:** If sensor input is missing, the numbers will be replaced with hyphens.

Rudder bar

Rudder position indicator with digital and analog readout. Direction indicator (**A**) is shown when rudder movement is commanded and rudder feedback is available.

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Basic operation

Safe operation with the autopilot

> ⚠ **Warning:** An autopilot is a useful navigational aid, but DOES NOT replace a human navigator.

> ⚠ **Warning:** Ensure the autopilot has been installed correctly, commissioned and calibrated before use.

Do not use automatic steering when:

- In heavy traffic areas or in narrow waters
- In poor visibility or extreme sea conditions
- When in areas where use of an autopilot is prohibited by law

When using an autopilot:

- Do not leave the helm unattended
- Do not place any magnetic material or equipment near the heading sensor used by the autopilot system
- Verify at regular intervals the course and position of the vessel
- Always switch the autopilot to standby and reduce speed in due time to avoid hazardous situations

Autopilot alerts

For safety reasons it is recommended to turn on all autopilot alerts when operating the autopilot.

For more information, refer to *"The alert system"* on page 36.

External system selector

IMO resolution MSC.64(67) and other regulations require that an external switch is used for controlling change-over from manual to automatic steering.

The mode descriptions in this manual assumes that an external system selector has opened for autopilot operation, or that no external selector is installed.

Manual steering

When an external system selector is set to manual steering, the autopilot will be disengaged. The control unit will display information as in Standby mode. It is not possible to change to FU, NFU or to any automatic mode. The menus can however be used, alerts acknowledged and illumination adjusted.

When the autopilot is disengaged by an external switch, this will be indicated in the mode display.
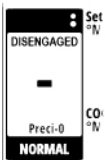
Autopilot operation

When the external selector is set to automatic steering, the autopilot will go directly to AUTO heading mode with present heading as set reference. The autopilot can then be used in all operational modes.

External EVC override (SG05 PRO)

You may at any time, irrespective of the autopilot mode, take manual control of the steering by means of the helm. The autopilot will then go to Standby mode and display Override to indicate the steering is from the helm. Autosteering can be resumed by pressing the **AUTO** or the **WORK** key.

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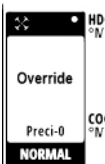
The Pendulum feature

The pendulum feature is intended for pendulum ferries where it is required to turn the heading 180° when the vessel is going backwards. The feature can be included in systems equipped with SD80 or AD80 boards.

The pendulum feature is activated by using an external switch. When the contact is closed, the heading from the main compass and the monitor compass will change 180°. The heading is changed before heading data enters the CAN bus network, and all devices on the bus will pick up the modified heading.

➔ **Note:** The system must be configured for the pendulum feature as described in the separate installation manual.

Turning the system ON and OFF

Turning ON

Press the standby/brilliance key to turn the system ON.

The system will be ON as long as power is connected.

Switch the system to sleep mode

Press and hold the Standby/Brilliance key on an active control unit to switch the system to sleep mode.

During the shut-down procedure the system will automatically go to Standby mode before it is turned off.

➔ **Note:** The Standby/Brilliance key will remain lit on units that are in sleep mode. To stop the system from drawing current a separate breaker should be installed.

Taking command

You can take command from any control unit and/or remote by pressing the Command key.

In an open system (no command transfer restrictions) you will get immediate control from the control unit requesting command. A steering handle without a Command key will get control when the lever is operated.

In a multi-station system with active lock function, the command request must be confirmed on the active control unit.

Active/passive units

In a system including more than one control unit and/or remote units, only one unit can be in control at a time. All other units will be passive.

A passive unit is indicated with a passive icon in the mode status field.

On a passive/locked unit illumination can be adjusted, alert sound can be locally silenced, and the Command key can be used for requesting command. All other functions are unavailable.